CDP-C69ES

SERVICE MANUAL

US Model
Canadian Model
Australian Model

Model Name Using Similar Mechanism	CDP-C525
Optical Pick-up Block Type	BU-5BD8B

SPECIFICATIONS

System	Compact disc digital audio system Semiconductor laser (λ=780 nm) Emission duration: continuous
Laser output	Max. 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response	2 Hz – 20 kHz ($\pm$0.3 dB)
Signal to noise ratio	More than 115 dB
Dynamic range	More than 100 dB
Harmonic distortion	Less than 0.0025% (1 kHz)
Channel separation	More than 110 dB (1 kHz)
Wow and flutter	Below measurable limit

Outputs

LINE OUT (FIXED) (phono jacks)	Output level 2 V (at 50 kiloohms, non DSP mode) Load impedance over 10 kiloohms
LINE OUT (VARIABLE) (phono jacks)	Output level max. 2 V (at 50 kiloohms, non DSP mode) Load impedance over 10 kiloohms
DIGITAL OUT (OPTICAL) (optical output connector)	Wave length 660 nm Output level –18 dBm
PHONES (stereo phone jack)	Output level max. 15 mW Load impedance 32 ohms

General

Power requirements	Model for USA and Canada 120 V AC, 60 Hz Model for Australia 240 V AC, 50/60 Hz
Power consumption	13 W
Dimensions	Approx. 430×125×385 mm (w/h/d) (17×5×15 1/4 inches) not including projecting parts and controls
Weight	Approx. 7 kg (15 lbs 7 oz), net

Remote commander RM-D615

Remote control system	Infrared control
Power requirements	3 V DC with two batteries size AA (IEC esignation R6)

Supplied accessories

Connecting cord (1)
(2 phono plugs ↔ 2 phono plugs)
Remote commander (1)
Sony SUM-3(NS) batteries (2)
Operating Manual (1)

— Continued on next page —

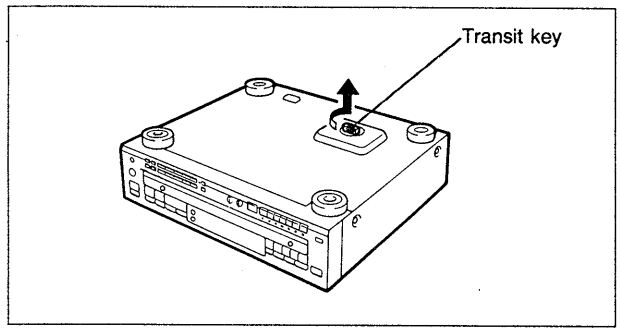
COMPACT DISC PLAYER
SONY

Optional accessory
Audio Optical connecting cord POC-15

Design and specifications subject to change without notice.

Note on the Transit Key

The transit key on the bottom exterior of the unit protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.
When transporting the unit, replace the key in its original hole and lock it in place.

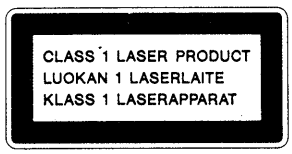


For the customers in Canada

CAUTION:
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

THIS APPARATUS COMPLIES WITH THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS SET OUT IN RADIO INTERFERENCE REGULATIONS.

For the customers in Australia



This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

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SAFETY-RELATED COMPONENT WARNING!!

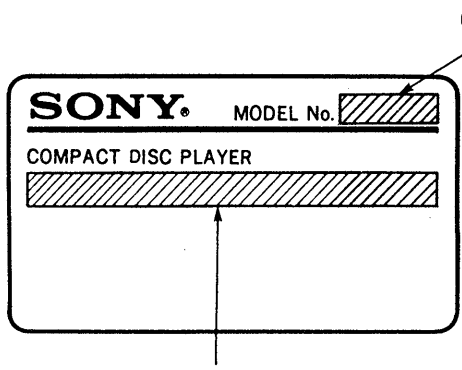
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MODEL IDENTIFICATION

—Model Number Label—



US, Canadian model : AC : 120V 60Hz

Australian model : AC : 240V~50/60Hz

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

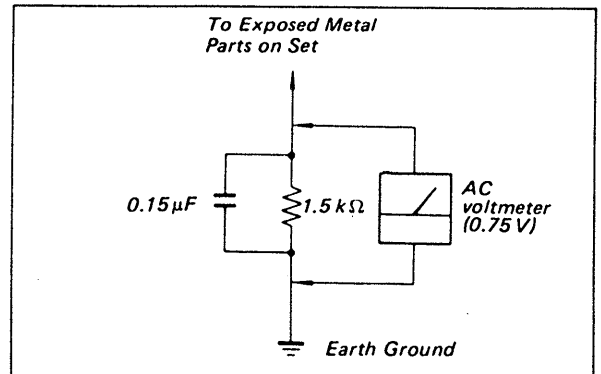


Fig. A. Using an AC voltmeter to check AC leakage.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties
   - Material: GaAlAs
   - Wavelength: 780 nm
   - Emission Duration: continuous
   - Laser Output: max. 44.6 μW*
     * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optiocal Pick-up Block (including APC borad).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

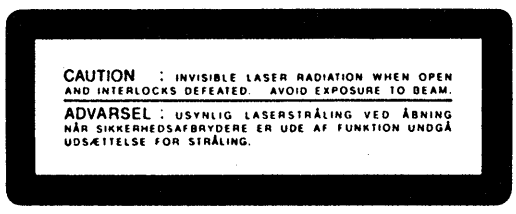
1. Laser-didoe data
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laseroutput: Max. 0,4 mW*
     * Målt i 1,6 mm afstand fra overfladen af objektivlinsen på den optiske pick-up enhed.
   - Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laserdioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning

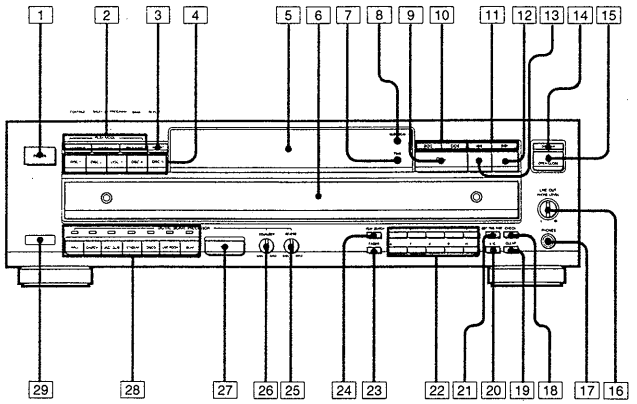

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING.

VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

1-1. LOCATION OF CONTROLS

SECTION 1
GENERAL

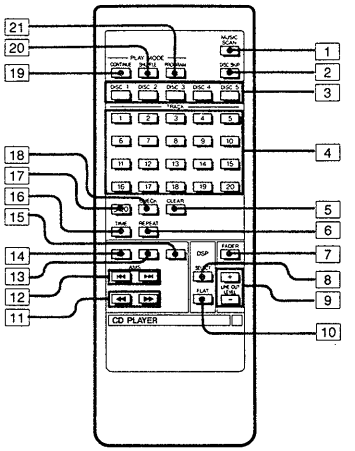
Front Panel



1 POWER switch
2 PLAY MODE buttons
CONTINUE button
SHUFFLE button
PROGRAM button
3 REPEAT button
4 DISC 1-5 buttons
5 Display window
6 Disc tray
7 TIME button
8 MUSIC SCAN button
9 ▶ (play) button
10 ⏮/⏭ (AMS*) buttons
11 ◀◀/▶▶ (manual search) buttons
12 ■ (stop) button
13 ⏸ (pause) button
14 DISC SKIP button
15 ⏏ OPEN/CLOSE button
16 LINE OUT/PHONE LEVEL control
17 PHONES jack
18 CHECK (program check) button
19 CLEAR (program clear) button
20 >10 (over 10) button
21 EDIT/TIME FADE button
22 Numeric buttons (1-10)
23 FADER button
24 PEAK SEARCH button
25 DIGITAL SIGNAL PROCESSOR REVERB control
26 DIGITAL SIGNAL PROCESSOR EQUALIZER control
27 DIGITAL SIGNAL PROCESSOR FLAT button
28 DIGITAL SIGNAL PROCESSOR mode select buttons and indicators
29 Remote sensor

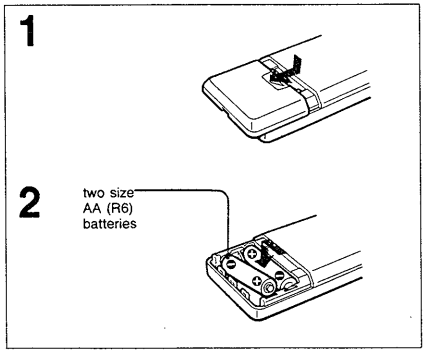
* AMS is the abbreviation of Automatic Music Sensor.

Remote Commander



1 MUSIC SCAN button
2 DISC SKIP button
3 DISC 1-5 buttons
4 Numeric buttons (1-20)
5 CLEAR (program clear) button
6 REPEAT button
7 FADER button
8 DIGITAL SIGNAL PROCESSOR SELECT button
9 LINE OUT LEVEL buttons
10 DIGITAL SIGNAL PROCESSOR FLAT button
11 ◀◀/▶▶ (manual search) buttons
12 ⏮/⏭ (AMS) buttons
13 ⏸ (pause) button
14 ▶ (play) button
15 ■ (stop) button
16 TIME button
17 >20 (over 20) button
18 CHECK (program check) button
19 CONTINUE button
20 SHUFFLE button
21 PROGRAM button

Installing Batteries in the Remote Commander

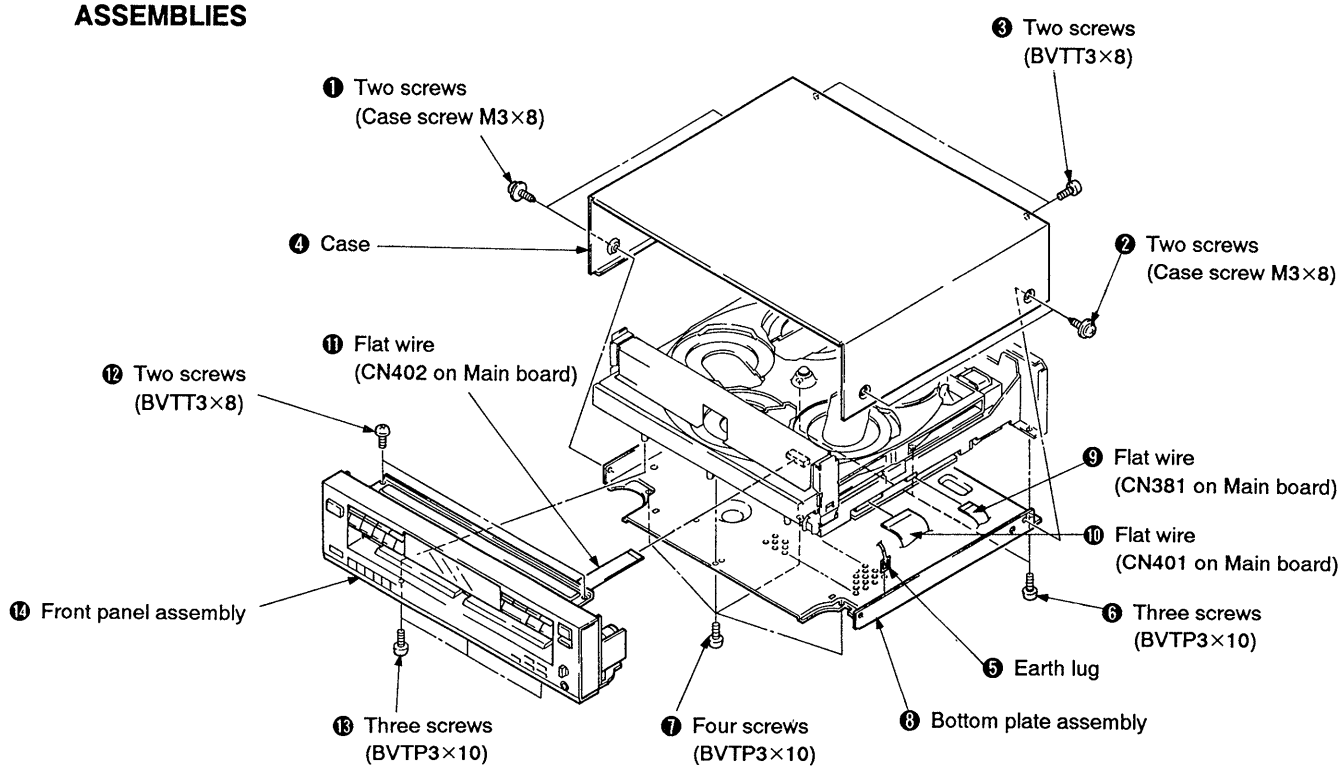


On battery life
- About half a year of normal operation can be expected when using the Sony SUM-3(NS) batteries.
- When the batteries are run down, the remote commander will not operate the unit. In this case, replace both batteries with new ones.

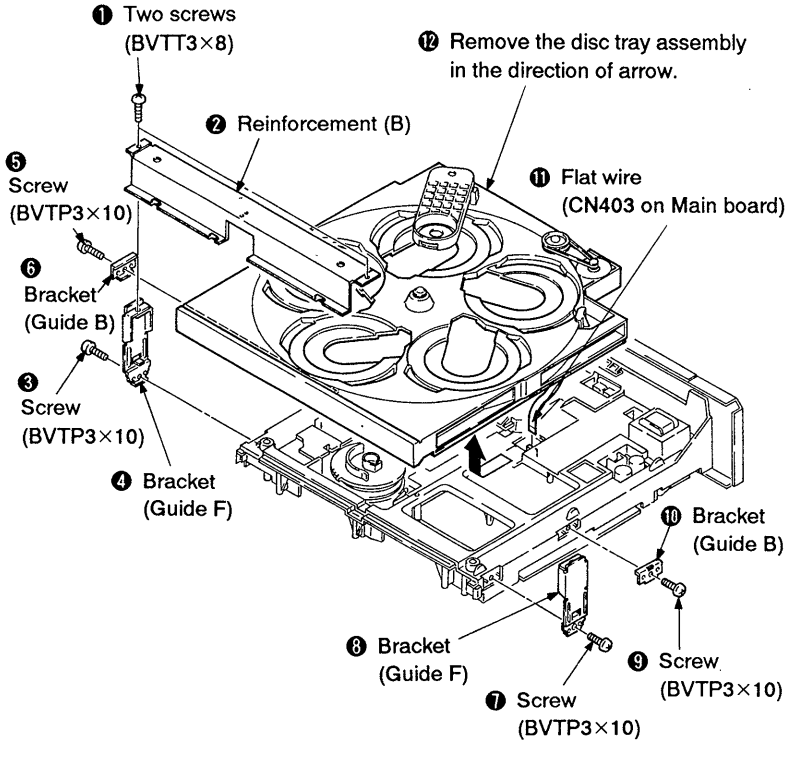
Notes on the remote commander and remote control operation
- Keep the commander away from extremely hot or humid places.
- Avoid dropping any foreign objects into the commander casing, particularly when replacing the batteries.
- Avoid exposing the remote sensor to direct sunlight or lighting apparatus. Such exposure can cause a malfunction.
- To avoid damage caused by battery leakage and corrosion, remove the batteries when the commander will not be used for a long time.

SECTION 2
DISASSEMBLY

2-1. REMOVAL OF CASE AND FRONT PANEL ASSEMBLIES

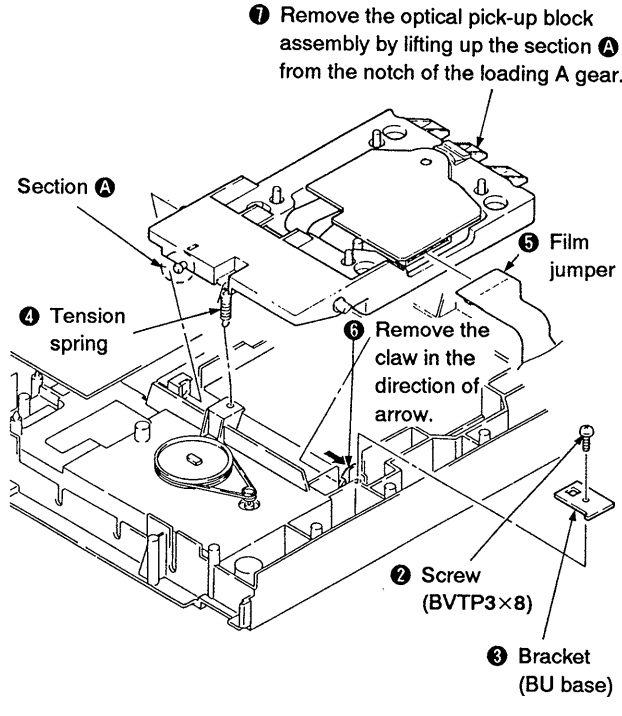

❸ Two screws (BVTT3×8)
❶ Two screws (Case screw M3×8)
❹ Case
❷ Two screws (Case screw M3×8)
⓫ Flat wire (CN402 on Main board)
⓬ Two screws (BVTT3×8)
❾ Flat wire (CN381 on Main board)
❿ Flat wire (CN401 on Main board)
⓮ Front panel assembly
❻ Three screws (BVTP3×10)
❺ Earth lug
⓭ Three screws (BVTP3×10)
❼ Four screws (BVTP3×10)
❽ Bottom plate assembly

2-2. REMOVAL OF DISC TRAY ASSEMBLY


❶ Two screws (BVTT3×8)
⓬ Remove the disc tray assembly in the direction of arrow.
❷ Reinforcement (B)
⓫ Flat wire (CN403 on Main board)
❺ Screw (BVTP3×10)
❻ Bracket (Guide B)
❸ Screw (BVTP3×10)
❹ Bracket (Guide F)
❿ Bracket (Guide B)
❽ Bracket (Guide F)
❾ Screw (BVTP3×10)
❼ Screw (BVTP3×10)

2-3. REMOVAL OF OPTICAL PICK-UP BLOCK ASSEMBLY

1) Replace the set up side down.

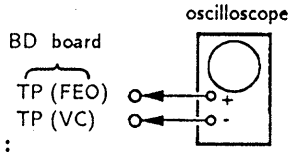

❼ Remove the optical pick-up block assembly by lifting up the section Ⓐ from the notch of the loading A gear.
Section Ⓐ
❺ Film jumper
❹ Tension spring
❻ Remove the claw in the direction of arrow.
❷ Screw (BVTP3×8)
❸ Bracket (BU base)

SECTION 3
ELECTRICAL BLOCK CHECKING

Note :

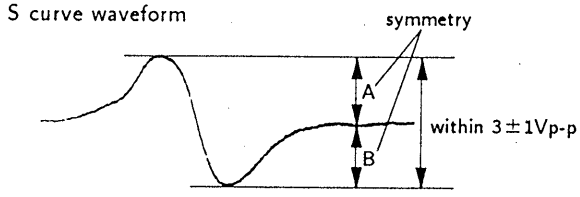
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

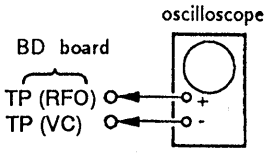


5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

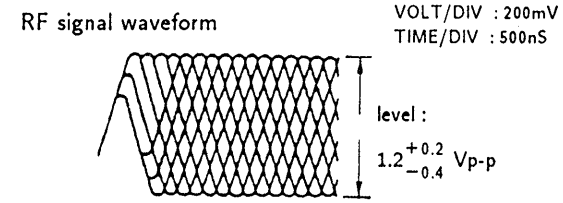


Procedure :

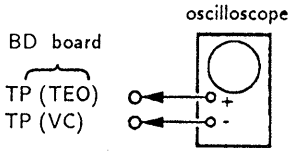
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

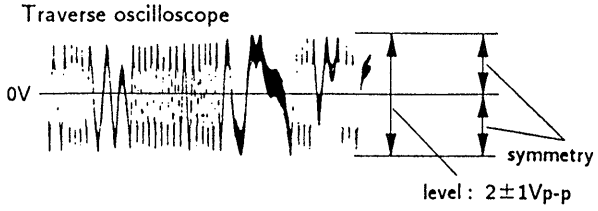


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

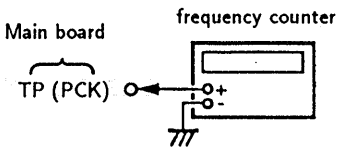


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.

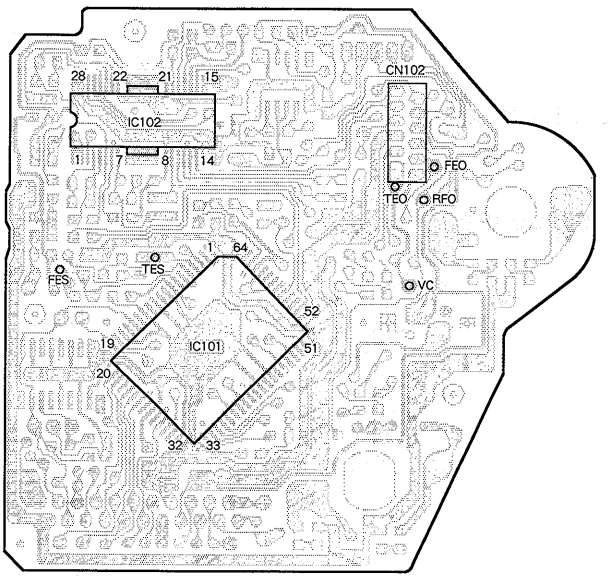
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Locations :

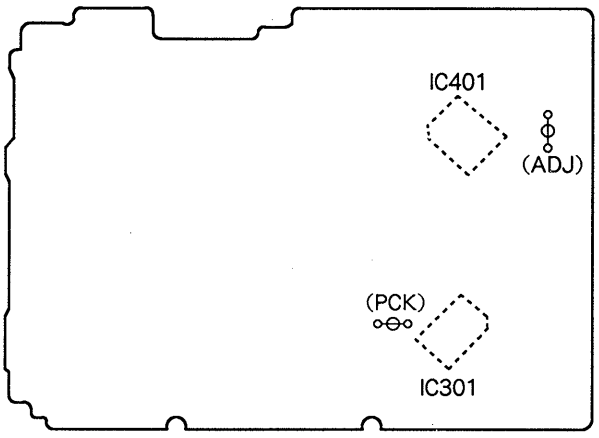
[BD board]

— conductor side —



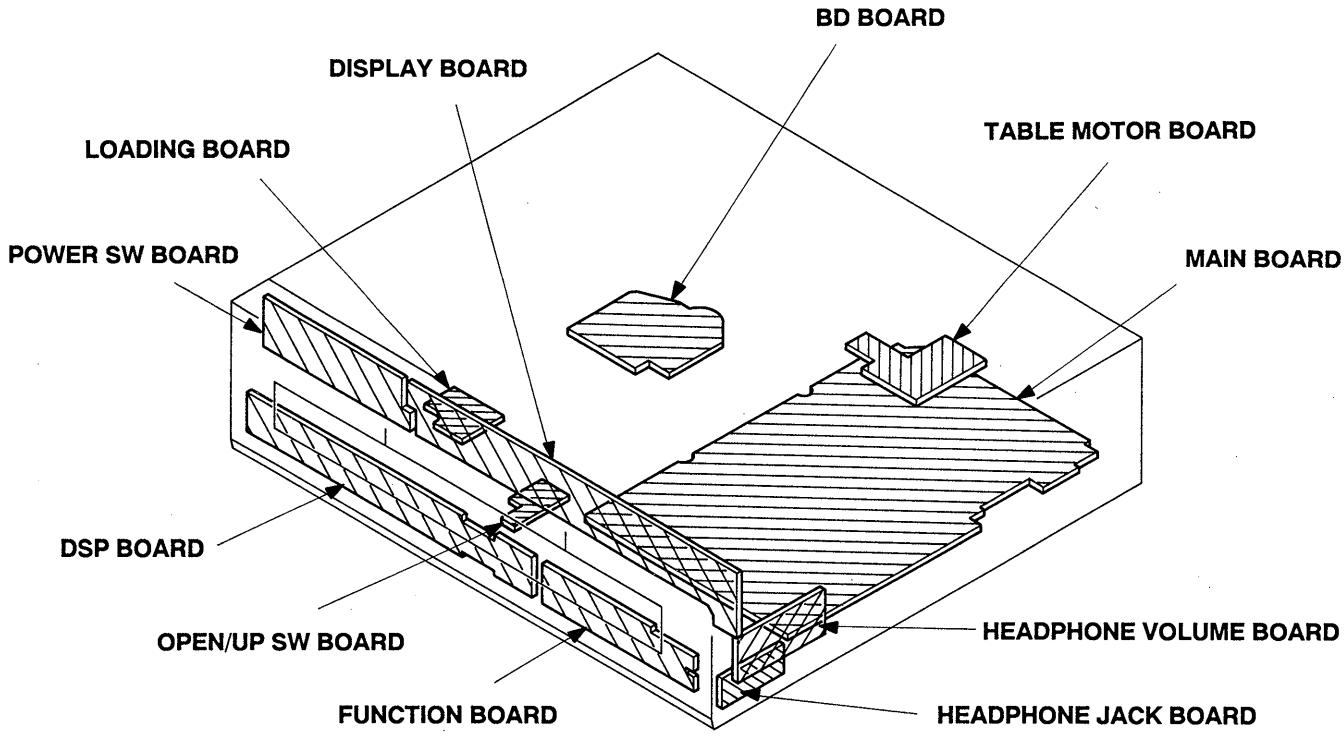
[Main board]

— component side —



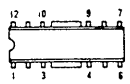
SECTION 4
DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION

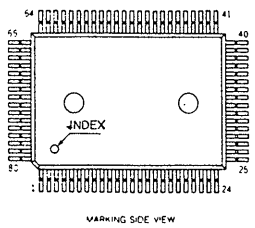


4-2. SEMICONDUCTOR LEAD LAYOUTS

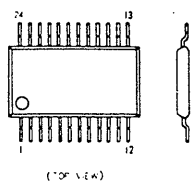
CXA1291P



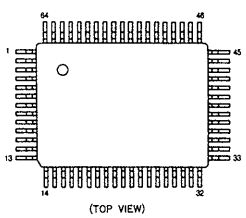
CXD2500AQ



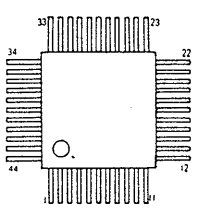
CXD2560M



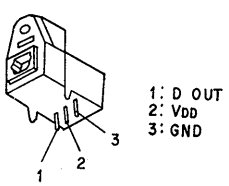
CXD2562Q



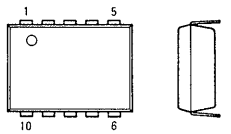
CXD2701Q



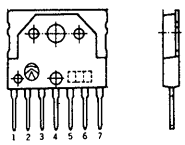
GP1F32T



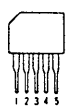
LA5601



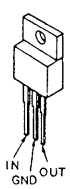
LA5602



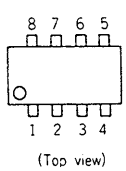
M5293L



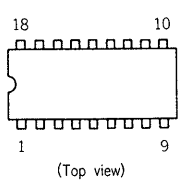
M5F7807L



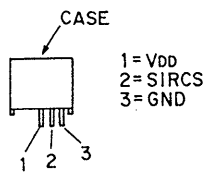
MC33078
RC4556D
RC4558P
TL082ACP



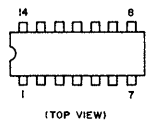
MS51464-10NC



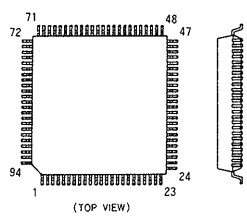
SBX1610-59



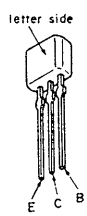
SN74HCU04AN



μPD75237GJ-024-5BG



2SA1175-HFE
2SC3623-LK
DTA124ES
DTC144ES

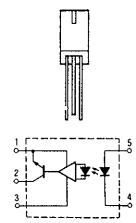


2SC1815-Y
DTA144ES

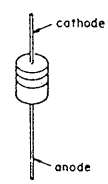
2SC2878-AB

RC78L12A-T1

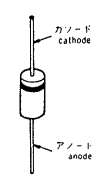
GP-1A521



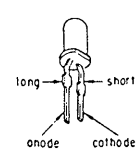
11ES2
RD8.2ES-B2



1N4148M

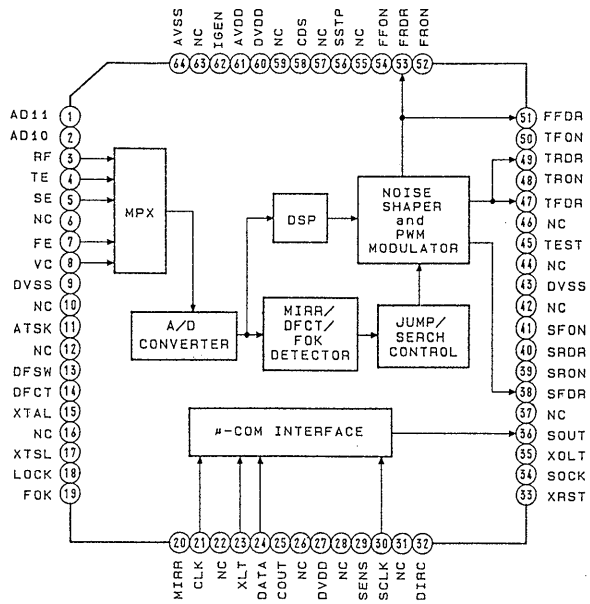


SEL2810A-C

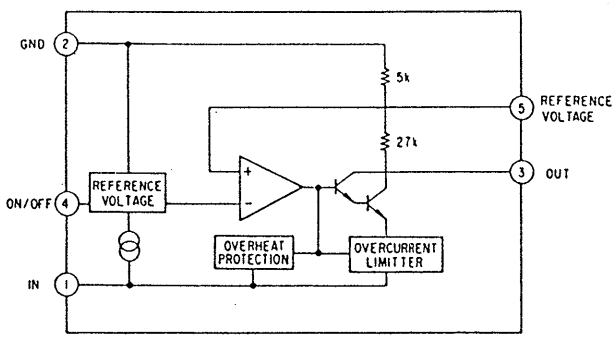


4-3. IC BLOCK DIAGRAMS

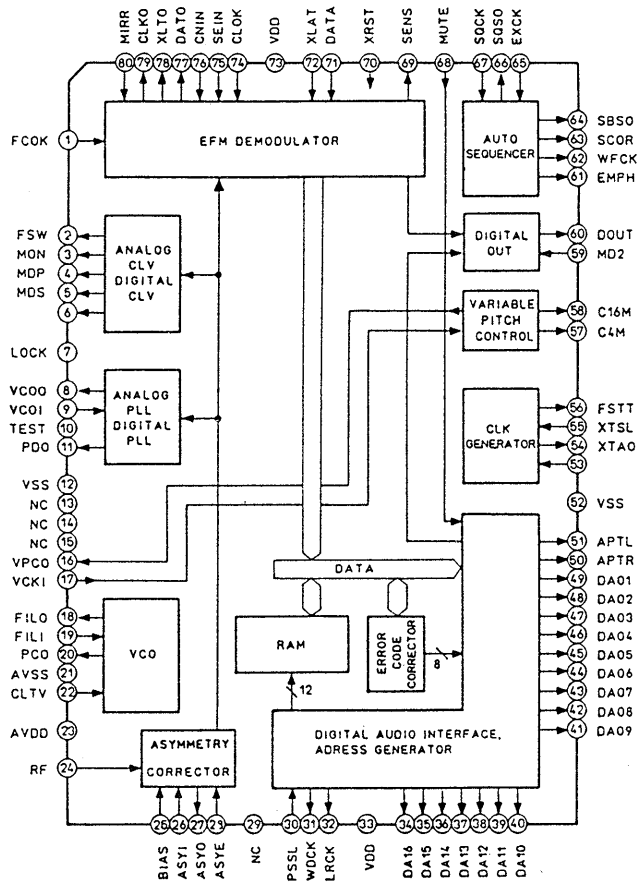
IC101 CXD2501Q



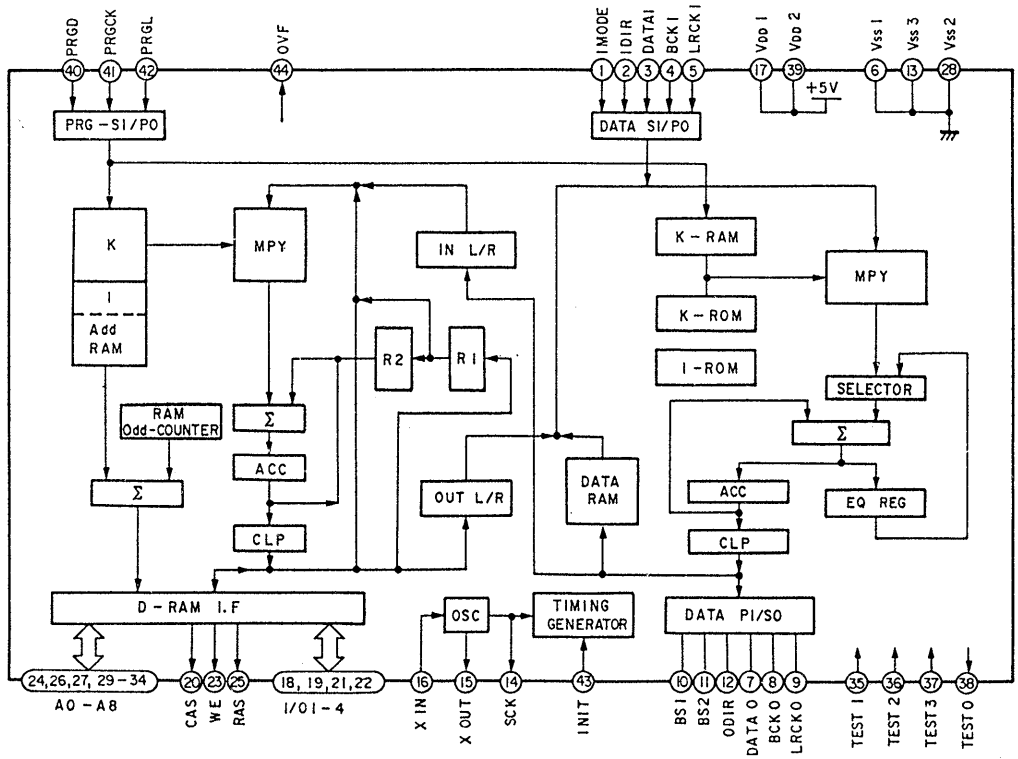
IC201 M5293L



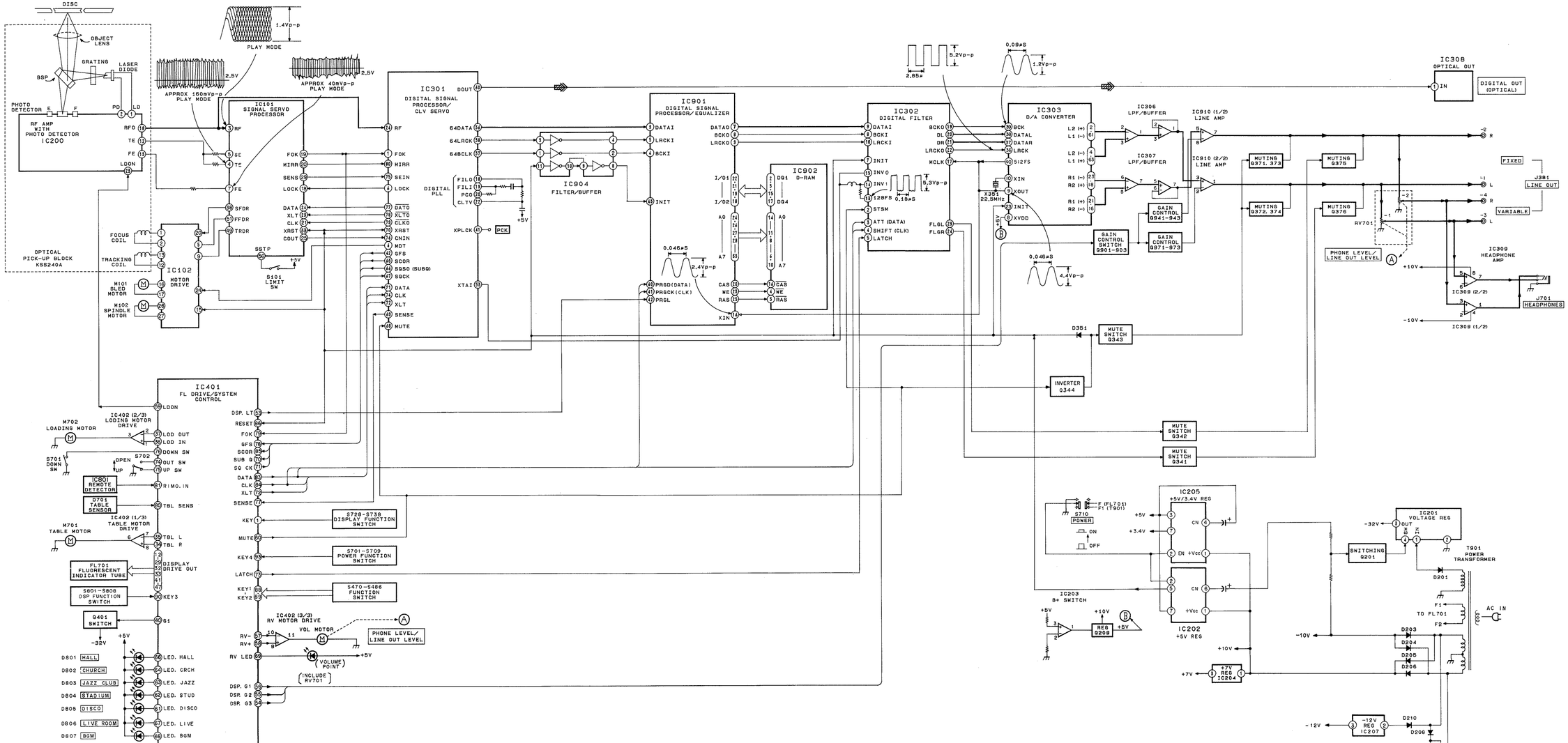
IC301 CXD2500Q



IC901 CXD2701Q



4-4. BLOCK DIAGRAMS



4-5. PRINTED WIRING BOARDS

- Refer to page 10 for Semiconductor Lead Layouts.
- Refer to page 11 for IC BLOCK Diagrams.

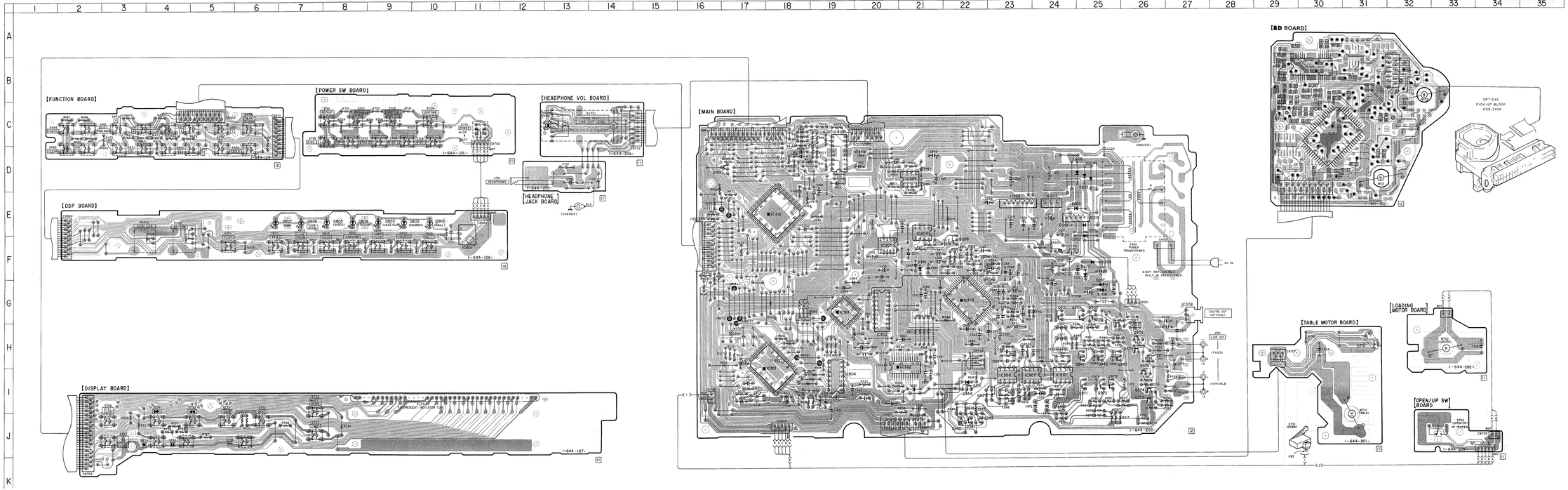
• Semiconductor Location

Ref.No.	Location
D201	E-25
D202	E-25
D203	D-25
D204	D-25
D205	E-25
D206	D-25
D207	F-25
D208	F-25
D209	G-25
D210	F-25
D341	F-21
D351	I-22
D701	H-31
D801	E-10
D802	E-9
D803	E-9
D804	E-8
D805	E-8
D806	E-7
D807	E-6
IC101	C-30
IC102	B-30
IC201	E-25
IC202	E-23
IC203	E-21
IC204	E-24
IC205	F-20
IC206	G-24
IC207	F-24
IC301	H-18
IC302	I-22
IC303	I-23
IC307	I-24
IC308	G-27
IC309	D-21
IC401	E-18
IC402	D-19
IC801	E-11
IC901	G-19
IC902	G-20
IC904	I-19
IC910	I-24
Q201	F-24
Q209	F-22
Q341	J-22
Q342	J-22
Q349	J-22
Q351	I-22
Q371	G-26
Q372	I-26
Q373	H-26
Q374	I-26
Q375	H-26
Q376	I-26
Q401	D-17
Q801	G-24
Q902	G-28
Q903	G-25
Q941	H-25
Q942	H-25
Q943	H-26
Q971	I-25
Q972	I-25
Q973	I-25

Note on Mounting Diagram:

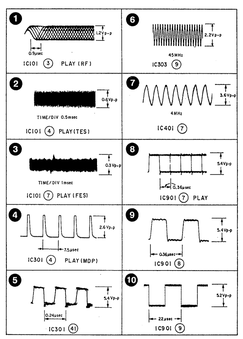
Note:

- ○— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.



4-6. SCHEMATIC DIAGRAM

- **Refer to page 10 for Semiconductor Lead Layouts.**
- **Refer to page 11 for IC BLOCK Diagrams.**


1 IC101 ③ PLAY (RF) 1.2Vp-p 0.5μs
2 IC101 ④ PLAY(TES) 0.6Vp-p TIME/DIV 0.5msec
3 IC101 ⑦ PLAY (FES) 0.9Vp-p TIME/DIV 1msec
4 IC301 ④ PLAY (MDP) 2.4Vp-p 2.5μsec
5 IC301 ④ 5.4Vp-p 0.25μsec
6 IC303 ⑤ 4.2Vp-p
7 IC401 ⑦ 4.5Vp-p 4MHz
8 IC901 ⑦ PLAY 5.4Vp-p 2.35μsec
9 IC901 ⑥ 5.4Vp-p 0.35μsec
10 IC901 ⑨ 3.2Vp-p

Note on Schematic Diagram:

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safty. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

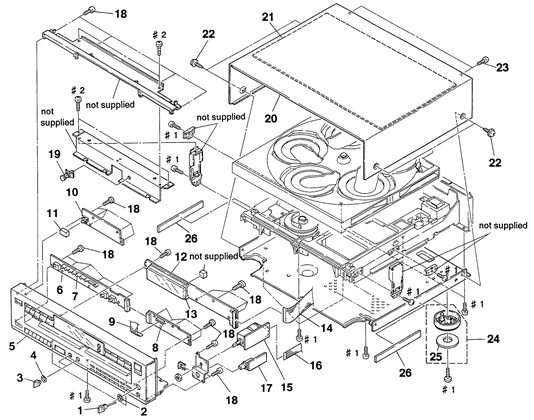
- ⏚ : B+ line
- ⏚ : B− line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ) Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

SECTION 5
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

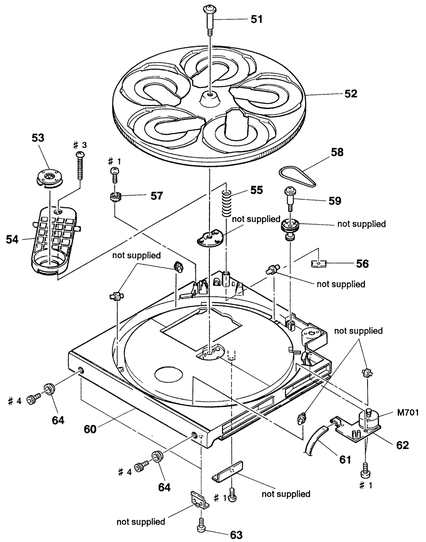
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. FRONT PANEL AND CASE ASSEMBLIES



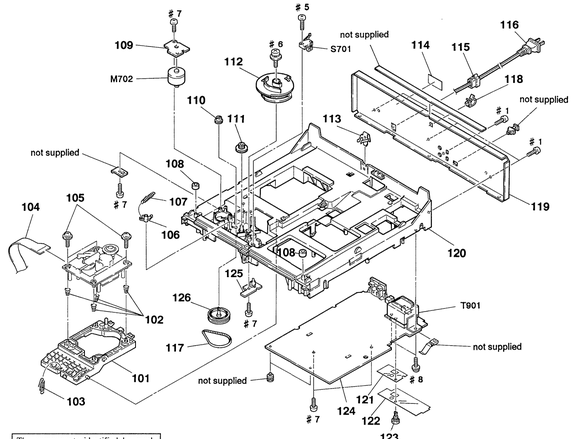
Ref.No.	Part No.	Description	Remark
1	A-4660-105-A	KNOB (HP) ASSY	
2	4-948-469-01	SPRING, RING	
3	4-944-154-01	KNOB (DSP)	
4	3-354-981-01	SPRING (SUS), RING	
5	X-4942-670-1	PANEL ASSY, FRONT (US, Canadian)	
5	X-4942-671-1	PANEL ASSY, FRONT (Australian)	
* 6	1-644-128-11	DSP BOARD	
* 7	4-952-230-01	HOLDER (LED)	
* 8	1-644-129-11	FUNCTION BOARD	
9	1-690-931-31	WIRE (FLAT TYPE) (19 CORE)	
* 10	1-644-126-11	POWER SW BOARD	
11	4-922-921-01	BUTTON (POWER)	
* 12	1-644-127-11	DISPLAY BOARD	
* 13	4-950-864-01	HOLDER (FL)	
14	1-690-933-31	WIRE (FLAT TYPE) (32 CORE)	
* 15	1-644-204-11	HEADPHONE VOLUME BOARD	
16	1-690-934-11	WIRE (FLAT TYPE) (13 CORE)	
* 17	1-644-205-11	HEADPHONE JACK BOARD	
18	4-951-620-01	SCREW (2.6X8), +BVTP	
* 19	3-350-847-31	HOLDER, PCB	
* 20	4-944-153-01	CASE	
21	A-4675-309-A	REINFORCEMENT (TOP PLATE) ASSY	
22	3-704-366-01	SCREW (CASE) (M3X8)	
23	3-703-685-21	SCREW (+BV 3X8)	
24	X-4942-188-1	FOOT ASSY	
25	4-923-836-11	CUSHION	
* 26	4-929-561-01	CUSHION (CASE)	

5-2. DISC TRAY ASSEMBLY



Ref.No.	Part No.	Description	Remark
51	4-926-384-01	SCREW, STEP	
52	4-926-383-11	TABLE (B), DISK	
* 53	1-452-538-11	MAGNET	
* 54	4-930-506-02	BRACKET (PRESS PULLEY)	
55	4-926-395-01	SPRING, COMPRESSION	
* 56	4-926-388-01	BRACKET (ADJUSTMENT)	
* 57	4-949-226-01	PLATE, LOCK	
58	4-926-399-01	BELT	
59	4-923-597-01	SCREW, STEP	
60	4-944-161-12	TABLE (A), DISC	
61	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
* 62	1-644-201-11	TABLE MOTOR BOARD	
63	4-926-635-01	SCREW, +BV (2.6X8) TAPPING	
64	4-934-307-01	ESCUTCHEON	
M701	A-4604-585-A	MOTOR ASSY, ROTARY (TABLE)	

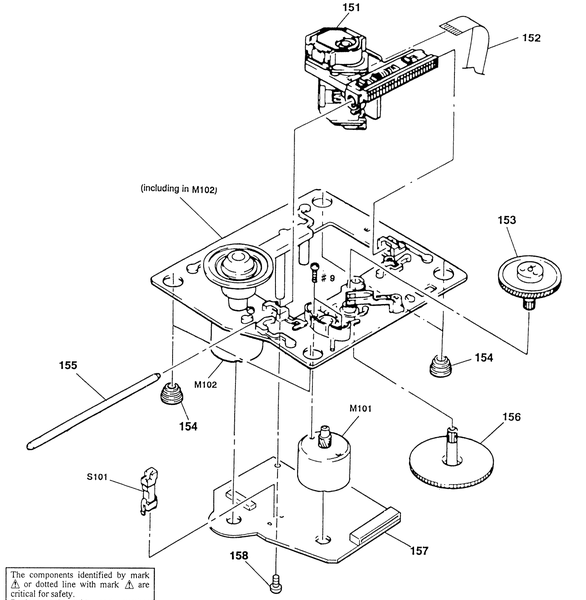
5-3. CHASSIS ASSEMBLY



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark
* 101	4-934-373-01	BRACKET (BU)	
102	4-949-385-01	SPRING (D), COIL	
103	4-937-911-01	SPRING, TENSION	
104	1-694-003-11	JUMPER, FILM (WITH TERMINAL)	
105	4-933-134-01	SCREW (+PTPWH M2.6X6)	
106	4-917-519-01	LEVER, SET	
107	4-924-412-01	SPRING (B), TENSION	
* 108	4-951-619-01	CUSHION (A)	
* 109	1-644-202-11	LOADING MOTOR BOARD	
110	4-934-375-01	GEAR (LOADING B)	
111	4-934-381-01	GEAR (LOADING C)	
112	4-934-391-01	GEAR (LOADING A)	
* 113	4-943-996-01	SPRING, LEAF	
* 114	4-941-546-01	LABEL, CLASS 1 (Australian)	
* 115	3-703-244-00	BUSHING (2104), CORD	
⚠116	1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)	
⚠116	1-590-836-11	CORD, POWER (US, Canadian)	
117	4-944-490-01	BELT (TIMING)	
* 118	4-949-235-01	HOOK	
* 119	4-951-174-11	PANEL, BACK (US, Canadian)	
* 119	4-951-174-21	PANEL, BACK (Australian)	
* 120	4-943-997-01	CHASSIS	
* 121	4-951-933-02	SHEET, INSULATING (Australian)	
* 122	4-944-178-01	SHEET (INSULATING)	
123	3-531-576-11	RIVET	
* 124	4-649-301-A	MAIN BOARD, COMPLETE (Australian)	
* 124	A-4649-303-A	MAIN BOARD, COMPLETE (US, Canadian)	
* 125	1-644-203-11	OPEN/UP SW BOARD	
126	X-4941-529-1	PULLEY ASSY	
M702	A-4604-834-A	MOTOR ASSY, LOADING	
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR) (DOWN)	
⚠T901	1-449-955-11	TRANSFORMER, POWER (Australian)	
⚠T901	1-450-876-11	TRANSFORMER, POWER (US, Canadian)	

5-4. OPTICAL PICK-UP BLOCK ASSEMBLY(BU-5BD8B)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark
⚠151	8-848-144-11	DEVICE, OPTICAL KSS-240A	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
153	4-917-567-01	GEAR (M)	
154	4-951-940-01	INSULATOR (BU)	
155	4-917-565-01	SHAFT, SLED	
156	4-917-564-01	GEAR (P), FLATNESS	
* 157	A-4649-199-A	BD BOARD, COMPLETE	
158	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE(OUTSERT) ASSY(SPINDLE)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

SECTION 6
ELECTRICAL PARTS LIST

BD DISPLAY

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Hardware (# mark) list is given in the last of this parts list.

Ref. No.	Part No.	Description			Remark
*	A-4649-199-A	BD BOARD, COMPLETE			
		**********			
		〈 CAPACITOR 〉			
C101	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	
C102	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C103	1-163-005-11	CERAMIC CHIP 470PF	10%	50V	
C104	1-164-505-11	CERAMIC CHIP 2.2uF		16V	
C105	1-135-155-21	TANTALUM CHIP 4.7uF	10%	16V	
C106	1-164-346-11	CERAMIC CHIP 1uF		16V	
C107	1-164-505-11	CERAMIC CHIP 2.2uF		16V	
C108	1-164-346-11	CERAMIC CHIP 1uF		16V	
C112	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C151	1-163-007-11	CERAMIC CHIP 680PF	10%	50V	
C152	1-163-007-11	CERAMIC CHIP 680PF	10%	50V	
C153	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
C154	1-164-336-11	CERAMIC CHIP 0.33uF		25V	
C155	1-163-007-11	CERAMIC CHIP 680PF	10%	50V	
C156	1-163-007-11	CERAMIC CHIP 680PF	10%	50V	
C157	1-163-037-11	CERAMIC CHIP 0.022uF	10%	25V	
C158	1-163-037-11	CERAMIC CHIP 0.022uF	10%	25V	
C159	1-163-023-00	CERAMIC CHIP 0.015uF	5%	50V	
C160	1-163-019-00	CERAMIC CHIP 0.0068uF	10%	50V	
C181	1-163-038-00	CERAMIC CHIP 0.1uF		25V	
		〈 CONNECTOR 〉			
CN101	1-568-861-11	SOCKET, CONNECTOR 18P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		〈 IC 〉			
IC101	8-752-344-48	IC CXD2501Q			
IC102	8-759-071-79	IC BA6297AFP-T1			
		〈 RESISTOR 〉			
R101	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R102	1-216-097-00	METAL CHIP 100K	5%	1/10W	
R103	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R104	1-216-085-00	METAL CHIP 33K	5%	1/10W	
R105	1-216-097-00	METAL CHIP 100K	5%	1/10W	
R112	1-216-049-00	METAL CHIP 1K	5%	1/10W	
R113	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R114	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R117	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R118	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R121	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R122	1-216-077-00	METAL CHIP 15K	5%	1/10W	
R151	1-216-070-00	METAL CHIP 7.5K	5%	1/10W	
R152	1-216-070-00	METAL CHIP 7.5K	5%	1/10W	
R153	1-216-070-00	METAL CHIP 7.5K	5%	1/10W	
R154	1-216-070-00	METAL CHIP 7.5K	5%	1/10W	
R155	1-216-070-00	METAL CHIP 7.5K	5%	1/10W	
R156	1-216-070-00	METAL CHIP 7.5K	5%	1/10W	
R157	1-216-085-00	METAL CHIP 33K	5%	1/10W	
R158	1-216-076-00	METAL CHIP 13K	5%	1/10W	
R159	1-216-085-00	METAL CHIP 33K	5%	1/10W	
R160	1-216-081-00	METAL CHIP 22K	5%	1/10W	
R161	1-216-093-00	METAL CHIP 68K	5%	1/10W	
R162	1-216-085-00	METAL CHIP 33K	5%	1/10W	
R163	1-216-308-00	METAL CHIP 4.7	5%	1/10W	
		〈 SWITCH 〉			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
**********					
*	1-644-127-11	DISPLAY BOARD			
		**********			
*	4-950-864-01	HOLDER (FL)			
		〈 CONNECTOR 〉			
CN705	1-691-899-21	CONNECTOR, FFC/FPC 32P			
		〈 FILTER 〉			
FL701	1-519-721-11	INDICATOR TUBE, FLUORESCENT			
		〈 RESISTOR 〉			
R721	1-249-417-11	CARBON 1K	5%	1/4W	
R722	1-249-419-11	CARBON 1.5K	5%	1/4W	
R723	1-249-416-11	CARBON 820	5%	1/4W	
R724	1-247-828-11	CARBON 750	5%	1/4W	
R725	1-249-415-11	CARBON 680	5%	1/4W	
R726	1-249-420-11	CARBON 1.8K	5%	1/4W	
R727	1-249-421-11	CARBON 2.2K	5%	1/4W	
R728	1-249-422-11	CARBON 2.7K	5%	1/4W	
R729	1-247-834-11	CARBON 1.3K	5%	1/4W	
R730	1-249-424-11	CARBON 3.9K	5%	1/4W	

DISPLAY DSP FUNCTION

Ref.No.	Part No.	Description	Remark
		〈 SWITCH 〉	
S728	1-554-303-21	SWITCH, TACTILE (DISC SKIP)	
S729	1-554-303-21	SWITCH, TACTILE (▶▶)	
S730	1-554-303-21	SWITCH, TACTILE (◀◀)	
S731	1-554-303-21	SWITCH, TACTILE (▷▷|)	
S732	1-554-303-21	SWITCH, TACTILE (|◁◁)	
S733	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)	
S734	1-554-303-21	SWITCH, TACTILE (■)	
S735	1-554-303-21	SWITCH, TACTILE (▮▮)	
S736	1-554-303-21	SWITCH, TACTILE (▷)	
S737	1-554-303-21	SWITCH, TACTILE (TIME)	
S738	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
**********			
*	1-644-128-11	DSP BOARD *********	
*	4-952-230-01	HOLDER (LED)	
		〈 CAPACITOR 〉	
C801	1-161-494-00	CERAMIC 0.022uF 25V	
		〈 CONNECTOR 〉	
* CN800	1-691-188-11	CONNECTOR, BOARD TO BOARD 18P	
		〈 DIODE 〉	
D801	8-719-301-52	LED SEL2810A-C	
D802	8-719-301-52	LED SEL2810A-C	
D803	8-719-301-52	LED SEL2810A-C	
D804	8-719-301-52	LED SEL2810A-C	
D805	8-719-301-52	LED SEL2810A-C	
D806	8-719-301-52	LED SEL2810A-C	
D807	8-719-301-52	LED SEL2810A-C	
		〈 IC 〉	
IC801	8-741-100-48	IC SBX1610-59	
		〈 RESISTOR 〉	
R801	1-249-415-11	CARBON 680 5% 1/4W	
R802	1-247-828-11	CARBON 750 5% 1/4W	
R803	1-249-416-11	CARBON 820 5% 1/4W	
R804	1-249-417-11	CARBON 1K 5% 1/4W	
R805	1-247-834-11	CARBON 1.3K 5% 1/4W	
R806	1-249-419-11	CARBON 1.5K 5% 1/4W	
R807	1-249-420-11	CARBON 1.8K 5% 1/4W	
R808	1-249-409-11	CARBON 220 5% 1/4W	
		〈 VARIABLE RESISTOR 〉	
RV801	1-241-514-11	RES, VAR, CARBON 10K (EQUALIZER)	
RV802	1-241-514-11	RES, VAR, CARBON 10K (REVERB)	
		〈 SWITCH 〉	
S801	1-554-303-21	SWITCH, TACTILE (FLAT)	
S802	1-554-303-21	SWITCH, TACTILE (BGM)	
S803	1-554-303-21	SWITCH, TACTILE (LIVE ROOM)	
S804	1-554-303-21	SWITCH, TACTILE (DISCO)	
S805	1-554-303-21	SWITCH, TACTILE (STADIUM)	
S806	1-554-303-21	SWITCH, TACTILE (JAZZ CLUB)	
S807	1-554-303-21	SWITCH, TACTILE (CHURCH)	
S808	1-554-303-21	SWITCH, TACTILE (HALL)	
**********			
*	1-644-129-11	FUNCTION BOARD **********	
		〈 CONNECTOR 〉	
CN402	1-691-897-21	CONNECTOR, FFC/FPC 19P	
* CN471	1-691-187-11	CONNECTOR, BOARD TO BOARD 18P	
		〈 RESISTOR 〉	
R470	1-249-415-11	CARBON 680 5% 1/4W	
R471	1-247-828-11	CARBON 750 5% 1/4W	
R472	1-249-416-11	CARBON 820 5% 1/4W	
R473	1-249-417-11	CARBON 1K 5% 1/4W	
R474	1-247-834-11	CARBON 1.3K 5% 1/4W	
R476	1-249-415-11	CARBON 680 5% 1/4W	
R477	1-247-828-11	CARBON 750 5% 1/4W	
R478	1-249-416-11	CARBON 820 5% 1/4W	
R479	1-249-417-11	CARBON 1K 5% 1/4W	
R480	1-247-834-11	CARBON 1.3K 5% 1/4W	
R481	1-249-419-11	CARBON 1.5K 5% 1/4W	
R482	1-249-420-11	CARBON 1.8K 5% 1/4W	
R483	1-249-421-11	CARBON 2.2K 5% 1/4W	
R484	1-249-422-11	CARBON 2.7K 5% 1/4W	
		〈 SWITCH 〉	
S470	1-554-303-21	SWITCH, TACTILE (10)	
S471	1-554-303-21	SWITCH, TACTILE (9)	
S472	1-554-303-21	SWITCH, TACTILE (8)	
S473	1-554-303-21	SWITCH, TACTILE (7)	
S474	1-554-303-21	SWITCH, TACTILE (6)	
S475	1-554-303-21	SWITCH, TACTILE (PEAK SERCH)	
S476	1-554-303-21	SWITCH, TACTILE (5)	
S477	1-554-303-21	SWITCH, TACTILE (4)	
S478	1-554-303-21	SWITCH, TACTILE (3)	
S479	1-554-303-21	SWITCH, TACTILE (2)	
S480	1-554-303-21	SWITCH, TACTILE (1)	
S481	1-554-303-21	SWITCH, TACTILE ()10)	
S482	1-554-303-21	SWITCH, TACTILE (FADER)	
S483	1-554-303-21	SWITCH, TACTILE (CLEAR)	

FUNCTION | HEADPHONE JACK | HEADPHONE VOL | LOADING MOTOR | MAIN

Ref. No.	Part No.	Description			Remark
S484	1-554-303-21	SWITCH, TACTILE (CHECK)			
S485	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)			
**********					
*	1-644-205-11	HEADPHONE JACK BOARD			
		**********			
		< CAPACITOR >			
C701	1-162-291-31	CERAMIC	560PF	10% 50V	
C702	1-162-291-31	CERAMIC	560PF	10% 50V	
C703	1-164-159-11	CERAMIC	0.1uF	50V	
		< JACK >			
J701	1-568-519-41	JACK, LARGE TYPE (HEADPHONES)			
		< LEAD >			
* LP701	1-690-880-31	LEAD (WITH CONNECTOR)			
**********					
*	1-644-204-11	HEADPHONE VOL BOARD			
		**********			
		< CAPACITOR >			
C706	1-161-494-00	CERAMIC	0.022uF	25V	
		< CONNECTOR >			
* CN702	1-691-892-11	CONNECTOR, FFC/FPC 13P			
		< VARIABLE RESISTOR >			
RV701	1-241-919-11	RES, VAR, CARBON 10K/10K			
		(PHONE LEVEL/LINE OUT LEVEL)			
**********					
*	1-644-202-11	LOADING MOTOR BOARD			
		**********			
		< CAPACITOR >			
C705	1-161-375-00	CERAMIC	0.0022uF	20% 50V	
**********					
*	A-4649-301-A	MAIN BOARD, COMPLETE (Australian)			
		**********			
*	A-4649-303-A	MAIN BOARD, COMPLETE (US, Canadian)			
		**********			
		< CAPACITOR >			
C201	1-124-572-11	ELECT	100uF	20% 63V	
C202	1-126-059-11	ELECT	10uF	20% 50V	
C203	1-124-887-00	ELECT	3300uF	20% 16V	
C204	1-126-937-11	ELECT	4700uF	20% 16V	
C205	1-126-163-11	ELECT	4.7uF	20% 50V	

Ref. No.	Part No.	Description			Remark
C206	1-126-163-11	ELECT	4.7uF	20% 50V	
C207	1-126-301-11	ELECT	1uF	20% 50V	
C209	1-124-997-11	ELECT	470uF	20% 10V	
C210	1-126-024-11	ELECT	220uF	20% 16V	
C212	1-124-997-11	ELECT	470uF	20% 10V	
C213	1-126-301-11	ELECT	1uF	20% 50V	
C214	1-136-157-00	FILM	0.022uF	5% 50V	
C215	1-124-997-11	ELECT	470uF	20% 10V	
C216	1-126-301-11	ELECT	1uF	20% 50V	
C217	1-124-471-00	ELECT	1000uF	20% 6.3V	
C218	1-126-023-11	ELECT	100uF	20% 16V	
C219	1-126-023-11	ELECT	100uF	20% 16V	
C220	1-124-120-11	ELECT	220uF	20% 25V	
C221	1-124-120-11	ELECT	220uF	20% 25V	
C222	1-126-024-11	ELECT	220uF	20% 16V	
C223	1-126-024-11	ELECT	220uF	20% 16V	
C224	1-161-494-00	CERAMIC	0.022uF	25V	
C301	1-124-589-11	ELECT	47uF	20% 16V	
C303	1-164-159-11	CERAMIC	0.1uF	50V	
C305	1-126-022-11	ELECT	47uF	20% 16V	
C306	1-164-159-11	CERAMIC	0.1uF	50V	
C307	1-164-159-11	CERAMIC	0.1uF	50V	
C311	1-136-161-00	FILM	0.047uF	5% 50V	
C312	1-161-374-11	CERAMIC	0.0015uF	20% 50V	
C313	1-161-494-00	CERAMIC	0.022uF	25V	
C314	1-162-306-11	CERAMIC	0.01uF	20% 16V	
C315	1-124-465-00	ELECT	0.47uF	20% 50V	
C316	1-161-494-00	CERAMIC	0.022uF	25V	
C317	1-161-494-00	CERAMIC	0.022uF	25V	
C318	1-164-159-11	CERAMIC	0.1uF	50V	
C319	1-162-282-31	CERAMIC	100PF	10% 50V	
C320	1-136-153-00	FILM	0.01uF	5% 50V	
C321	1-164-159-11	CERAMIC	0.1uF	50V	
C322	1-164-159-11	CERAMIC	0.1uF	50V	
C323	1-164-159-11	CERAMIC	0.1uF	50V	
C324	1-164-159-11	CERAMIC	0.1uF	50V	
C331	1-162-208-31	CERAMIC	24PF	5% 50V	
C332	1-136-170-00	FILM	0.27uF	5% 50V	
C333	1-164-159-11	CERAMIC	0.1uF	50V	
C336	1-126-022-11	ELECT	47uF	20% 16V	
C339	1-124-589-11	ELECT	47uF	20% 16V	
C340	1-126-022-11	ELECT	47uF	20% 16V	
C341	1-164-159-11	CERAMIC	0.1uF	50V	
C342	1-124-589-11	ELECT	47uF	20% 16V	
C343	1-164-159-11	CERAMIC	0.1uF	50V	
C344	1-164-159-11	CERAMIC	0.1uF	50V	
C345	1-162-205-31	CERAMIC	18PF	5% 50V	
C346	1-164-159-11	CERAMIC	0.1uF	50V	
C347	1-164-159-11	CERAMIC	0.1uF	50V	
C348	1-164-159-11	CERAMIC	0.1uF	50V	

MAIN

Ref. No.	Part No.	Description			Remark
C349	1-164-159-11	CERAMIC	0.1uF	50V	
C350	1-126-022-11	ELECT	47uF	20% 16V	
C351	1-164-159-11	CERAMIC	0.1uF	50V	
C352	1-164-159-11	CERAMIC	0.1uF	50V	
C353	1-162-199-31	CERAMIC	10PF	5% 50V	
C354	1-162-199-31	CERAMIC	10PF	5% 50V	
C355	1-164-159-11	CERAMIC	0.1uF	50V	
C356	1-126-022-11	ELECT	47uF	20% 16V	
C357	1-164-159-11	CERAMIC	0.1uF	50V	
C358	1-164-159-11	CERAMIC	0.1uF	50V	
C359	1-164-159-11	CERAMIC	0.1uF	50V	
C360	1-164-159-11	CERAMIC	0.1uF	50V	
C361	1-162-289-31	CERAMIC	390PF	10% 50V	
C363	1-162-285-31	CERAMIC	180PF	10% 50V	
C364	1-162-285-31	CERAMIC	180PF	10% 50V	
C365	1-162-285-31	CERAMIC	180PF	10% 50V	
C366	1-162-285-31	CERAMIC	180PF	10% 50V	
C367	1-162-289-31	CERAMIC	390PF	10% 50V	
C371	1-130-479-00	MYLAR	0.0047uF	5% 50V	
C372	1-130-479-00	MYLAR	0.0047uF	5% 50V	
C373	1-130-472-00	MYLAR	0.0012uF	5% 50V	
C374	1-130-472-00	MYLAR	0.0012uF	5% 50V	
C377	1-126-022-11	ELECT	47uF	20% 16V	
C378	1-126-022-11	ELECT	47uF	20% 16V	
C379	1-130-473-00	MYLAR	0.0015uF	5% 50V	
C380	1-130-473-00	MYLAR	0.0015uF	5% 50V	
C401	1-126-022-11	ELECT	47uF	20% 16V	
C402	1-164-159-11	CERAMIC	0.1uF	50V	
C403	1-126-023-11	ELECT	100uF	20% 16V	
C404	1-126-023-11	ELECT	100uF	20% 16V	
C408	1-164-159-11	CERAMIC	0.1uF	50V	
C409	1-164-159-11	CERAMIC	0.1uF	50V	
C410	1-164-159-11	CERAMIC	0.1uF	50V	
C412	1-126-022-11	ELECT	47uF	20% 16V	
C413	1-161-494-00	CERAMIC	0.022uF	25V	
C414	1-161-494-00	CERAMIC	0.022uF	25V	
C415	1-164-159-11	CERAMIC	0.1uF	50V	
C416	1-164-159-11	CERAMIC	0.1uF	50V	
C450	1-126-024-11	ELECT	220uF	20% 16V	
C460	1-126-024-11	ELECT	220uF	20% 16V	
C901	1-161-494-00	CERAMIC	0.022uF	25V	
C902	1-126-022-11	ELECT	47uF	20% 16V	
C903	1-164-159-11	CERAMIC	0.1uF	50V	
C904	1-164-159-11	CERAMIC	0.1uF	50V	
C905	1-164-159-11	CERAMIC	0.1uF	50V	
C941	1-162-219-31	CERAMIC	68PF	5% 50V	
C942	1-126-022-11	ELECT	47uF	20% 16V	
C943	1-124-463-00	ELECT	0.1uF	20% 50V	
C944	1-124-463-00	ELECT	0.1uF	20% 50V	
C945	1-124-463-00	ELECT	0.1uF	20% 50V	
C971	1-162-219-31	CERAMIC	68PF	5% 50V	
C972	1-126-022-11	ELECT	47uF	20% 16V	
C973	1-124-463-00	ELECT	0.1uF	20% 50V	
C974	1-124-463-00	ELECT	0.1uF	20% 50V	
C975	1-124-463-00	ELECT	0.1uF	20% 50V	

〈 CONNECTOR 〉

Ref. No.	Part No.	Description	Remark
* CN201	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P	
* CN202	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CN301	1-691-895-21	CONNECTOR, FFC/FPC 18P	
* CN381	1-691-892-11	CONNECTOR, FFC/FPC 13P	
* CN401	1-691-900-12	CONNECTOR, FFC/FPC 32P	
* CN402	1-691-898-12	CONNECTOR, FFC/FPC 19P	
* CN403	1-568-824-11	SOCKET, CONNECTOR 5P	
* CN404	1-568-943-11	PIN, CONNECTOR 5P	

〈 DIODE 〉

Ref. No.	Part No.	Description	Remark
D201	8-719-200-82	DIODE 11ES2	
D202	8-719-110-08	DIODE RD8.2ES-B2	
D203	8-719-200-82	DIODE 11ES2	
D204	8-719-200-82	DIODE 11ES2	
D205	8-719-200-82	DIODE 11ES2	
D206	8-719-200-82	DIODE 11ES2	
D207	8-719-987-63	DIODE 1N4148M	
D208	8-719-987-63	DIODE 1N4148M	
D209	8-719-987-63	DIODE 1N4148M	
D210	8-719-987-63	DIODE 1N4148M	
D341	8-719-210-21	DIODE 11EQS04	
D351	8-719-987-63	DIODE 1N4148M	

〈 IC 〉

Ref. No.	Part No.	Description	Remark
IC201	8-759-633-42	IC M5293L	
IC202	8-759-061-65	IC LA5602	
IC203	8-759-945-58	IC RC4558P	
IC204	8-759-604-86	IC M5F7807L	
IC205	8-759-821-93	IC LA5601	
IC206	8-759-982-26	IC RC78L12A	
IC207	8-759-982-48	IC RC79L12A	
IC301	8-752-337-26	IC CXD2500AQ	
IC302	8-752-342-65	IC CXD2560M	
IC303	8-759-044-10	IC CXD2562Q	
IC306	8-759-503-91	IC TL082ACP	
IC307	8-759-073-60	IC MC3307BP	
IC308	8-749-921-12	IC GP1F32T	
IC309	8-759-981-85	IC RC4556D	
IC401	8-759-066-14	IC uPD75237GJ-024-5BG	
IC402	8-759-821-32	IC CXA1291P	
IC901	8-752-341-99	IC CXD2701Q	
IC902	8-759-508-41	IC MS51464-10NC	
IC904	8-759-917-18	IC SN74HCU04AN	
IC910	8-759-073-60	IC MC3307BP	

Ref. No.	Part No.	Description				Remark
		〈 JACK 〉				
J381	1-569-443-21	JACK, PIN 4P (LINE OUT)				
		〈 COIL 〉				
L301	1-412-473-21	INDUCTOR	0uH			
L306	1-408-403-00	INDUCTOR	3.3uH			
L331	1-408-403-00	INDUCTOR	3.3uH			
L341	1-412-473-21	INDUCTOR	0uH			
L342	1-412-473-21	INDUCTOR	0uH			
L343	1-412-473-21	INDUCTOR	0uH			
L350	1-412-473-21	INDUCTOR	0uH			
L351	1-412-473-21	INDUCTOR	0uH			
L353	1-412-473-21	INDUCTOR	0uH			
L361	1-412-473-21	INDUCTOR	0uH			
L362	1-412-473-21	INDUCTOR	0uH			
L363	1-412-473-21	INDUCTOR	0uH			
L401	1-412-473-21	INDUCTOR	0uH			
		〈 TRANSISTOR 〉				
Q201	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q209	8-729-281-52	TRANSISTOR	2SC1815-Y			
Q341	8-729-900-65	TRANSISTOR	DTA144ES			
Q342	8-729-900-65	TRANSISTOR	DTA144ES			
Q343	8-729-900-65	TRANSISTOR	DTA144ES			
Q344	8-729-900-89	TRANSISTOR	DTC144ES			
Q371	8-729-141-30	TRANSISTOR	2SC3623A-LK			
Q372	8-729-141-30	TRANSISTOR	2SC3623A-LK			
Q373	8-729-141-30	TRANSISTOR	2SC3623A-LK			
Q374	8-729-141-30	TRANSISTOR	2SC3623A-LK			
Q375	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q376	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q401	8-729-900-89	TRANSISTOR	DTC144ES			
Q901	8-729-900-63	TRANSISTOR	DTA124ES			
Q902	8-729-900-63	TRANSISTOR	DTA124ES			
Q903	8-729-900-63	TRANSISTOR	DTA124ES			
Q941	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q942	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q943	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q971	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q972	8-729-231-55	TRANSISTOR	2SC2878-AB			
Q973	8-729-231-55	TRANSISTOR	2SC2878-AB			
		〈 RESISTOR 〉				
R001	1-249-417-11	CARBON	1K	5%	1/4W	
R201	1-249-435-11	CARBON	33K	5%	1/4W	
R202	1-249-438-11	CARBON	56K	5%	1/4W	
R203	1-249-429-11	CARBON	10K	5%	1/4W	
R210	1-249-429-11	CARBON	10K	5%	1/4W	
R211	1-249-410-11	CARBON	270	5%	1/4W	
R215	1-249-417-11	CARBON	1K	5%	1/4W	
R302	1-249-417-11	CARBON	1K	5%	1/4W	
R303	1-249-417-11	CARBON	1K	5%	1/4W	
R305	1-249-405-11	CARBON	100	5%	1/4W	
R306	1-249-413-11	CARBON	470	5%	1/4W	
R309	1-249-405-11	CARBON	100	5%	1/4W	
R311	1-249-423-11	CARBON	3.3K	5%	1/4W	
R312	1-249-429-11	CARBON	10K	5%	1/4W	
R313	1-249-423-11	CARBON	3.3K	5%	1/4W	
R314	1-249-429-11	CARBON	10K	5%	1/4W	
R315	1-249-417-11	CARBON	1K	5%	1/4W	
R316	1-249-417-11	CARBON	1K	5%	1/4W	
R317	1-249-417-11	CARBON	1K	5%	1/4W	
R318	1-249-441-11	CARBON	100K	5%	1/4W	
R319	1-247-903-00	CARBON	1M	5%	1/4W	
R321	1-249-417-11	CARBON	1K	5%	1/4W	
R322	1-249-417-11	CARBON	1K	5%	1/4W	
R323	1-249-417-11	CARBON	1K	5%	1/4W	
R324	1-249-418-11	CARBON	1.2K	5%	1/4W	
R330	1-249-417-11	CARBON	1K	5%	1/4W	
R331	1-249-417-11	CARBON	1K	5%	1/4W	
R332	1-247-893-11	CARBON	390K	5%	1/4W	
R342	1-249-417-11	CARBON	1K	5%	1/4W	
R343	1-249-441-11	CARBON	100K	5%	1/4W	
R344	1-249-441-11	CARBON	100K	5%	1/4W	
R345	1-249-425-11	CARBON	4.7K	5%	1/4W	
R346	1-249-425-11	CARBON	4.7K	5%	1/4W	
R347	1-249-441-11	CARBON	100K	5%	1/4W	
R348	1-249-429-11	CARBON	10K	5%	1/4W	
R351	1-249-428-11	CARBON	8.2K	5%	1/4W	
R352	1-249-428-11	CARBON	8.2K	5%	1/4W	
R353	1-249-428-11	CARBON	8.2K	5%	1/4W	
R354	1-249-428-11	CARBON	8.2K	5%	1/4W	
R355	1-249-428-11	CARBON	8.2K	5%	1/4W	
R356	1-249-428-11	CARBON	8.2K	5%	1/4W	
R357	1-249-428-11	CARBON	8.2K	5%	1/4W	
R358	1-249-428-11	CARBON	8.2K	5%	1/4W	
R359	1-247-848-11	CARBON	5.1K	5%	1/4W	
R361	1-249-425-11	CARBON	4.7K	5%	1/4W	
R362	1-249-425-11	CARBON	4.7K	5%	1/4W	
R363	1-249-425-11	CARBON	4.7K	5%	1/4W	
R364	1-249-425-11	CARBON	4.7K	5%	1/4W	
R365	1-249-429-11	CARBON	10K	5%	1/4W	
R366	1-249-429-11	CARBON	10K	5%	1/4W	
R367	1-249-429-11	CARBON	10K	5%	1/4W	
R368	1-249-429-11	CARBON	10K	5%	1/4W	
R369	1-249-419-11	CARBON	1.5K	5%	1/4W	
R370	1-249-419-11	CARBON	1.5K	5%	1/4W	
R371	1-249-419-11	CARBON	1.5K	5%	1/4W	
R372	1-249-419-11	CARBON	1.5K	5%	1/4W	

MAIN | OPEN/UP SW

Ref. No.	Part No.	Description				Remark
R373	1-247-887-00	CARBON	220K	5%	1/4W	
R374	1-247-887-00	CARBON	220K	5%	1/4W	
R375	1-249-409-11	CARBON	220	5%	1/4W	
R376	1-249-409-11	CARBON	220	5%	1/4W	
R377	1-249-409-11	CARBON	220	5%	1/4W	
R378	1-249-409-11	CARBON	220	5%	1/4W	
R379	1-249-421-11	CARBON	2.2K	5%	1/4W	
R380	1-249-421-11	CARBON	2.2K	5%	1/4W	
R381	1-249-425-11	CARBON	4.7K	5%	1/4W	
R382	1-249-425-11	CARBON	4.7K	5%	1/4W	
R383	1-249-414-11	CARBON	560	5%	1/4W	
R384	1-249-414-11	CARBON	560	5%	1/4W	
R385	1-249-393-11	CARBON	10	5%	1/4W	
R386	1-249-393-11	CARBON	10	5%	1/4W	
R389	1-249-414-11	CARBON	560	5%	1/4W	
R390	1-249-414-11	CARBON	560	5%	1/4W	
R403	1-249-425-11	CARBON	4.7K	5%	1/4W	
R404	1-249-425-11	CARBON	4.7K	5%	1/4W	
R405	1-249-425-11	CARBON	4.7K	5%	1/4W	
R406	1-249-425-11	CARBON	4.7K	5%	1/4W	
R408	1-249-441-11	CARBON	100K	5%	1/4W	
R409	1-249-434-11	CARBON	27K	5%	1/4W	
R410	1-249-441-11	CARBON	100K	5%	1/4W	
R411	1-247-876-11	CARBON	75K	5%	1/4W	
R412	1-247-876-11	CARBON	75K	5%	1/4W	
R413	1-249-440-11	CARBON	82K	5%	1/4W	
R414	1-247-874-11	CARBON	62K	5%	1/4W	
R415	1-249-435-11	CARBON	33K	5%	1/4W	
R416	1-247-878-00	CARBON	91K	5%	1/4W	
R417	1-247-878-00	CARBON	91K	5%	1/4W	
R418	1-247-878-00	CARBON	91K	5%	1/4W	
R419	1-249-440-11	CARBON	82K	5%	1/4W	
R420	1-249-440-11	CARBON	82K	5%	1/4W	
R421	1-249-393-11	CARBON	10	5%	1/4W	
R422	1-249-393-11	CARBON	10	5%	1/4W	
R423	1-249-393-11	CARBON	10	5%	1/4W	
R424	1-249-411-11	CARBON	330	5%	1/4W	
R425	1-249-429-11	CARBON	10K	5%	1/4W	
R426	1-249-429-11	CARBON	10K	5%	1/4W	
R427	1-249-429-11	CARBON	10K	5%	1/4W	
R430	1-249-429-11	CARBON	10K	5%	1/4W	
R432	1-249-429-11	CARBON	10K	5%	1/4W	
R433	1-249-429-11	CARBON	10K	5%	1/4W	
R434	1-249-429-11	CARBON	10K	5%	1/4W	
R451	1-249-441-11	CARBON	100K	5%	1/4W	
R452	1-249-437-11	CARBON	47K	5%	1/4W	
R453	1-249-405-11	CARBON	100	5%	1/4W	
R461	1-249-441-11	CARBON	100K	5%	1/4W	
R462	1-249-437-11	CARBON	47K	5%	1/4W	
R463	1-249-405-11	CARBON	100	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R901	1-249-417-11	CARBON	1K	5%	1/4W	
R902	1-249-417-11	CARBON	1K	5%	1/4W	
R903	1-249-417-11	CARBON	1K	5%	1/4W	
R915	1-249-441-11	CARBON	100K	5%	1/4W	
R916	1-249-441-11	CARBON	100K	5%	1/4W	
R917	1-249-441-11	CARBON	100K	5%	1/4W	
R921	1-249-417-11	CARBON	1K	5%	1/4W	
R922	1-249-420-11	CARBON	1.8K	5%	1/4W	
R923	1-249-417-11	CARBON	1K	5%	1/4W	
R924	1-249-417-11	CARBON	1K	5%	1/4W	
R925	1-249-417-11	CARBON	1K	5%	1/4W	
R941	1-249-419-11	CARBON	1.5K	5%	1/4W	
R943	1-249-441-11	CARBON	100K	5%	1/4W	
R945	1-249-425-11	CARBON	4.7K	5%	1/4W	
R946	1-249-425-11	CARBON	4.7K	5%	1/4W	
R947	1-249-425-11	CARBON	4.7K	5%	1/4W	
R948	1-249-421-11	CARBON	2.2K	5%	1/4W	
R949	1-249-422-11	CARBON	2.7K	5%	1/4W	
R950	1-247-836-11	CARBON	1.6K	5%	1/4W	
R951	1-247-828-11	CARBON	750	5%	1/4W	
R952	1-247-832-11	CARBON	1.1K	5%	1/4W	
R953	1-249-410-11	CARBON	270	5%	1/4W	
R971	1-249-419-11	CARBON	1.5K	5%	1/4W	
R973	1-249-441-11	CARBON	100K	5%	1/4W	
R975	1-249-425-11	CARBON	4.7K	5%	1/4W	
R976	1-249-425-11	CARBON	4.7K	5%	1/4W	
R977	1-249-425-11	CARBON	4.7K	5%	1/4W	
R978	1-249-421-11	CARBON	2.2K	5%	1/4W	
R979	1-249-422-11	CARBON	2.7K	5%	1/4W	
R980	1-247-836-11	CARBON	1.6K	5%	1/4W	
R981	1-247-828-11	CARBON	750	5%	1/4W	
R982	1-247-832-11	CARBON	1.1K	5%	1/4W	
R983	1-249-410-11	CARBON	270	5%	1/4W	

〈 CRYSTAL 〉

X351 1-579-161-11 VIBRATOR, CRYSTAL
X401 1-577-358-21 VIBRATOR, CERAMIC

****

* 1-644-203-11 OPEN/UP SW BOARD
****

〈 CONNECTOR 〉

* CN705 1-573-383-21 PIN, CONNECTOR (PC BOARD) 2P

〈 SWITCH 〉

S702 1-571-300-21 SWITCH, ROTARY (OPEN/UP)

****

POWER SW | TABLE MOTOR

Ref. No.	Part No.	Description				Remark
*	1-644-126-11	POWER SW BOARD				
		**********				
		〈 CONNECTOR 〉				
* CN702	1-568-943-11	PIN, CONNECTOR 5P				
		〈 RESISTOR 〉				
R701	1-249-421-11	CARBON	2.2K	5%	1/4W	
R702	1-249-420-11	CARBON	1.8K	5%	1/4W	
R703	1-249-419-11	CARBON	1.5K	5%	1/4W	
R704	1-249-415-11	CARBON	680	5%	1/4W	
R705	1-247-828-11	CARBON	750	5%	1/4W	
R706	1-249-416-11	CARBON	820	5%	1/4W	
R707	1-249-417-11	CARBON	1K	5%	1/4W	
R708	1-247-834-11	CARBON	1.3K	5%	1/4W	
		〈 SWITCH 〉				
S701	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S702	1-554-303-21	SWITCH, TACTILE (PROGRAM)				
S703	1-554-303-21	SWITCH, TACTILE (SHUFFLE)				
S704	1-554-303-21	SWITCH, TACTILE (CONTINUE)				
S705	1-554-303-21	SWITCH, TACTILE (DISC 5)				
S706	1-554-303-21	SWITCH, TACTILE (DISC 4)				
S707	1-554-303-21	SWITCH, TACTILE (DISC 3)				
S708	1-554-303-21	SWITCH, TACTILE (DISC 2)				
S709	1-554-303-21	SWITCH, TACTILE (DISC 1)				
S710	1-572-714-11	SWITCH, PUSH (POWER)				
**********						
*	1-644-201-11	TABLE MOTOR BOARD				
		**********				
		〈 CAPACITOR 〉				
C704	1-161-375-00	CERAMIC	0.0022uF	20%	50V	
		〈 CONNECTOR 〉				
* CN707	1-573-044-11	SOCKET, CONNECTOR 5P				
		〈 DIODE 〉				
D701	8-719-970-19	DIODE GP-1A521				
		〈 RESISTOR 〉				
R701	1-249-416-11	CARBON	820	5%	1/4W	
**********						
		MISCELLANEOUS				
		**********				
9	1-690-931-31	WIRE (FLAT TYPE) (19 CORE)				
14	1-690-933-31	WIRE (FLAT TYPE) (32 CORE)				
16	1-690-934-11	WIRE (FLAT TYPE) (13 CORE)				
* 53	1-452-538-11	MAGNET				
61	1-590-849-11	WIRE, FLAT TYPE (5 CORE)				
104	1-694-003-11	JAMPER, FILM (WITH TARMINAL)				
⚠116	1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)				
⚠116	1-590-836-11	CORD, POWER (US, Canadian)				
⚠151	8-848-144-11	DEVICE, OPTICAL KSS-240A				
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE)				
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR) (DOWN)				
⚠T901	1-449-955-11	TRANSFORMER, POWER (Australian)				
⚠T901	1-450-876-11	TRANSFORMER, POWER (US, Canadian)				
M701	A-4604-585-A	MOTOR ASSY, ROTARY (TABLE)				
M702	A-4604-834-A	MOTOR ASSY, LOADING				
M101	X-4917-504-1	MOTOR ASSY (SLED)				
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE)				
**********						
		ACCESSORIES & PACKING MATERIALS				
		**********				
	1-465-729-11	REMOTE COMMANDER				
	1-558-271-11	CORD, CONNECTION				
	3-707-584-01	COVER, BATTERY				
	3-755-137-21	MANUAL, INSTRUCTION (ENGLISH)				
	3-755-137-31	MANUAL, INSTRUCTION (FRENCH) (Canadian)				
	4-937-945-01	PLATE (TRANSPORT), LOCK				
*	4-941-548-01	LABEL, CLASS 1 (Australian)				
*	4-944-110-01	CUSHION (FRONT)				
*	4-944-111-01	CUSHION (REAR)				
*	4-949-235-01	HOOK				
*	4-951-752-41	INDIVIDUAL CARTON				
**********						
		**********				
		HARDWARE LIST				
		**********				
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S				
#2	7-682-548-04	SCREW +BVTT 3X8 (S)				
#3	7-682-554-04	SCREW +B 3X25				
#4	7-683-401-04	BOLT, HEXAGON SOCKET 3X4				
#5	7-685-136-19	SCREW +P 2.6X12 TYPE2 NON-SLIT				
#6	7-682-661-09	SCREW +PSW 4X8				
#7	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S				
#8	7-685-647-79	SCREW, TAPPING				
#9	7-621-255-15	SCREW +P 2X3				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

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Audio Group

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